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Attachment

Reconciliation of Chinese Communist Cotton Crop Figures with Estimates of Uses of Cotton

1. In the course of a study we are making of investment in the Chinese Communist cotton textile industry, we have been unable to reconcile official Chinese cotton crop figures with our estimates of cotton used by industry, handicraft shops, and households. Early when shortages of raw cotton are causing the Chinese cotton textile industry to operate considerably below capacity, with resulting widespread unemployment, a comparison of crop figures and identified uses shows, unexpectedly, over 200,000 metric tons of cotton not accounted for. The attached table shows these comparisons for 1954-58. A number of different combinations of assumptions have been tested, but all show the same surprising result: that in 1956-1958 cotton available minus cotton used gives an annual residual about 200,000 tons greater than the residuals in 1954 and 1955. If there were a consistently large residual for all these years, then a ready explanation would probably be available, in the form of either an unidentified basic use in the Chinese economy or an incorrect conversion factor. However, what is needed in the present case is an explanation of why residuals for 1956-58 are so high relative to residuals in 1954 and 1955.

2. Several hypotheses have been advanced to account for the high residual of 1956-58:

a. Hypothesis No. 1: The crop figures for 1956-58 are overstated by about 15%, because of changes in the basis of calculation, deliberate falsification, or other cause. Strong support for this hypothesis is given by the announcements of state procurements of cotton, which show 345,000 tons of the 1956 cotton crop remaining in producers' hands in 1957 at a time when state mills are short of cotton; if the producers actually were in possession of 345,000 tons, why wouldn't the government simply step in and procure additional amounts?

b. Hypothesis No. 2: Some unidentified branch of industry or other user has greatly stepped up its use of cotton in 1956 and 1957. Unfortunately for this hypothesis, the two most logical candidates for "Industry X", the synthetic and rayon industries, are

very small in relation to the amounts of cotton involved, and are nests of cotton linters (a byproduct of the ginning process) rather than ginned cotton itself.

c. Hypothesis No. 3: Large amounts of ginned cotton are now being exported to the Soviet Union.

d. Hypothesis No. 4: The Chinese Communists are stockpiling large amounts of cotton. This hypothesis is placed somewhat in doubt by the evidences of current severe shortages in the textile industry.

e. Hypothesis No. 5: The figures in the table do not necessarily give a reliable year-by-year estimate of the residual because of the many assumptions employed, such as the assumption that last year's crop is to be assumed in the current year's supply of raw materials.

3. This problem of reconciling crop figures with estimates of amounts of cotton used is considered in State, GIN. IR-7523, 5 June 57, Chinese Communist Cotton Production, C. Although the calculations in IR-7523 are not so detailed as those used in preparing the table attached to this memorandum, the last column in the table on page 2 of IR-7523 shows the same pattern of very high residuals for 1956 and 1957 contrasted to low residuals in 1954 and 1955, as follows:

1953	190,000 MT
1954	20,000 MT
1955	30,000 MT
1956	220,000 MT
1957	190,000 MT

4. To judge from the abstract on page 1 of IR-7523, the author of the report is inclined to accept the hypothesis that the unexplained residuals are caused by an overestimating by 14-15 percent of the crop for 1952 and subsequent years. It would seem, however, that this hypothesis would be more satisfactory if the overestimating was assumed to have occurred only for the last two crops, since it is the internal pattern of the residuals that is difficult to explain, specifically the huge residuals of 1956 and 1957 at a time of professed shortages.

... Communist China,

(in MT)

	(1)	(2)	(3)	(4)	(5)	(6)
1952	1,133	723	152	45	200	13
1953	1,327	810	134	46	204	133
1954	1,772	803	170	47	208	-56
1955	1,131	774	106	48	212	-9
1956	1,553	1,024	95	49	216	159
1957	1,465	904	85	50	221	209
1958	1,400*	819	75	51	225	230

(1) Cotton stock of preceding year plus imports of current year.

(2) Use for factory-produced yarn (yield of yarn from ginned cotton taken as 20.1% in 1952, 92.0% in 1953, 92.4% in 1954, and 93.0% thereafter).

(3) Use for textile yarn (same yield factors as in Column (2)).

(4) Use for urban padding (assumed to increase with population).

(5) Use for rural padding and home spinning (assumed to increase with population).

(6) Residual.

* No estimate for imports included in this figure.

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